Achieving Land Degradation Neutrality and some SLM practices

An overview of Bosnia and Herzegovina – Federation of BiH entity priorities and strategy

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LDN target setting process and FAO/GEF project „Decision Support for Mainstreaming and Scaling up of Sustainable Land Management“ (DS-SLM-GCP/GLO/337/GFF) are being implemented in both entities.
Context of land degradation

Key indicators

Land cover change

Land productivity dynamics

Organic carbon content
LDN target setting process

MAIN LDN TARGET

• Improve land quality and protection and restore degraded land functions in specific ecosystems or minimize adverse environmental impacts

This target is aimed at developing programs and projects for the protection, rehabilitation and regulation of degraded land, as well as increasing its fertility.

LDN SUB-TARGETS

• Land management in support of environmental protection and spatial planning system

This sub-target pertains to the establishment of a land condition and land use monitoring system, and the development of reporting indicators.

• Establish a basis for harmonious and spatially balanced socio-economic development, with a focus on marginalized and degraded areas

This sub-target is aimed at developing and improving the legislative on agricultural and forest land, as well as adopting strategic documents in which the LDN approach will be fully integrated. The focus is also placed on building the capacity of stakeholders in the area of land resources use and management.
Federation BiH Government initiatives towards LDN

• Projects on the development of the *Study on land use value* that are implemented by the Faculty of Agricultural and Food Sciences of the Sarajevo University as well as environmental strategies have been recognized as the most important basis for mainstreaming the LDN.

• Opportunities arising in the mainstreaming and strengthening of activities are also related to the planned measures and projects in the basic strategic documents, both at the Federation and cantonal levels.

• FAO/GEF project „Decision Support for Mainstreaming and Scaling up of Sustainable Land Management“ (DS-SLM-GCP/GLO/337/GFF).

What additionally is required to achieve LDN in Bosnia and Herzegovina – Federation of BiH

• Identification of more hot spots and specific land degradation issues;

• Land degradation issues and its solutions have to be a part of five years projections and plans in accordance with the laws and by laws which regulate LDN;

• Implementation of project and measures have to be in line with recognized methodologies and tools;

• Monitoring - indicators have to be developed as well as indicators of success; capacity building is crucial.
FAO/GEF project „Decision Support for Mainstreaming and Scaling up of Sustainable Land Management“ (DS-SLM-GCP/GLO/337/GFF)

Decision Support Framework for SLM mainstreaming and scaling out

MODULE 1
Operational Strategy and Action Plan for mainstreaming and scaling out SLM

Phase A REVIEW AND INITIAL STRATEGY AND ACTION PLAN

MODULE 2
National / Subnational Level Assessment
Assessment of LD & SLM Partnerships with policy institutions and financing mechanisms

MODULE 3
Selection of Priority Landscapes

MODULE 4
Landscape Level Assessment
Assessment of LD & SLM Livelihoods and natural resources assessment Selection of SLM Best Practices

MODULE 5
SLM Territorial Planning
Prioritization and action plan for implementation with stakeholders SLM support mechanisms, partnerships with decentralized policy institutions and financing mechanisms

MODULE 6
SLM Implementation and scaling out
Multi-sector and multi-stakeholder process and impact assessment

MODULE 7
Knowledge management platform for informed decision making

Phase B PARTNERSHIPS AND CAPACITY DEVELOPMENT

Phase C SCALING OUT THROUGH POLICIES, TERRITORIAL STRATEGIES, INCENTIVES, FINANCING MECHANISMS
## LDN measures identified

<table>
<thead>
<tr>
<th>Measures</th>
<th>Amount of funds and potential sources</th>
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<tbody>
<tr>
<td>DEVELOPMENT OF LAND USE VALUE MAP</td>
<td>Municipal funds from budget restructuring</td>
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<tr>
<td>REMEDIATION OF DEGRADED LAND</td>
<td>Areas of exploitation with a special focus on: Banovići, Lukavac, Tuzla, Živinice, Kalesija, Srebrenik, Zenica, Breza, Kakanj, Novi Travnik, Donji Vakuf</td>
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<tr>
<td>FULL SCALE APPROACH IN LAND EROSION PROTECTION</td>
<td>Tuzla Canton, Sarajevo Canton, Zenica-Doboj Canton, Herzegovina (Dinarides)</td>
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<tr>
<td>CONSTRUCTION OF FLOOD PROTECTION INFRASTRUCTURAL FACILITIES</td>
<td>Karst fields of the Dinaric Herzegovina region, river valley of the Bosna, river valleys of the Spreča and Tinja</td>
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Module 1. Operational strategy and Action plan for mainstreaming and scaling out

TUZLA CANTON  →  SLM APPROACH AND TECHNOLOGIES / LDN
RAVNO MUNICIPALITY  →  LAND CONSOLIDATION

Module 2. National /subnational assessment

- **FEDERATION OF BIH**: analysis of land cover/use database and changes (2000-2012), legislation, strategic documents.
- **TUZLA CANTON**: analysis of land degradation, spatial plan, legislation, strategic documents.
- **MUNICIPALITIES OF TUZLA CANTON**: assessment done through preparation of land capability maps/databases in GIS and land use studies for nine municipalities in Tuzla Canton.
- **RAVNO MUNICIPALITY**: land consolidation.
Module 3. Selection of priority landscapes

Criteria used for selection of landscape

- Types of land degradation,
- Surface of degraded areas,
- Existance of land capability maps and studies as a basis for planning and analysis,
- Interest of local communities for SLM,
- Capabilities of local communities (e.g. participation in FAO PLUD project),
- Ongoing projects and activities,
- Possibilities for funding of SLM,
- Economic-ecological zones (e.g. potential for agriculture).
Module 4. Local / landscape assessments
Module 5. SLM Territorial planning

Participatory Development
Proces razvoja sa učešćem svih zainteresiranih strana

Stake Holders
Municipality Administration
Farmer associations
Business associations
Environment groups
Refugee groups
Hunting/fishing/sport associations
Other interested parties

Zainteresirane strane
Opštinske strukture
Udržavanje poljoprivrede
Trgovačka-poslovna udruženja
Udruženja koje se bave zaštitom okoliša
Udruženja izbjeglica
Lovačka, ribarska, sportska udruženja
Ostali zainteresovani korisnici

Hot spots – priorities

SLM Approach – LAND CAPABILITY STUDY AND MAPS

SLM best practices – LAND CONSOLIDATION, SOIL REMEDIATION, EROSION PROTECTION MEASURES etc.
Participatory development
Module 1. Mainstreaming strategy

The Operational Strategy for SLM Mainstreaming and Scaling out (DS-SLM Mainstreaming Strategy) shall define the mechanism for the country to support decisions, by strengthening the contribution of the DLDD/SLM methodological assessments, tools and project findings to key decision-making processes (mainstreaming and scaling up) in order to promote the dissemination of identified SLM practices (scaling out). The DS-SLM Mainstreaming Strategy should have impact on:

- Facilitating SLM implementation.
- Improving the understanding and importance of land degradation and SLM issues.
- Providing long term support for SLM implementation and scaling out (beyond the DS-SLM project).
### Types of decision-making processes and policy instruments for mainstreaming SLM

<table>
<thead>
<tr>
<th>Category</th>
<th>Policy Instruments</th>
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| **Policies and Regulations**   | • National Development policies  
• Sectoral policies (agriculture, economy, environment,..)  
• Regulatory instruments: Legislation, regulations  
• National strategies and action plans |
| **Programmes and Projects**    | • National and subnational sectoral and cross-sectoral programmes and projects (environment, agriculture, climate change, small business, etc.) |
| **Incentives and Financing Mechanisms** | • Financing frameworks (budget allocation)  
• Economic and non-economic incentives  
• Microcredits  
• Financing mechanisms and funds (e.g. watershed funds)  
• Certification schemes |
| **Territorial Planning Processes** | • Territorial planning processes  
• Administrative units budget allocation for SLM  
• Information and monitoring systems |
| **Local Decisions**            | • Local organizations (producers associations, indigenous organization, etc.)  
• Local management plans |
Mainstreaming strategy

Key Mainstreaming objective: To integrate SLM into Development strategy of Tuzla Canton 2016-2020

Some of priority projects/ideas:

1. Regulation of Spreca river is a key priority in the Tuzla Canton
2. Landslides / erosion protection
3. Land consolidation
4. Soil remediation
5. Development of infrastructure such as water pools and irrigation systems due to the fact that canton is most vulnerable area in BiH to drought and climate change
Module 6. SLM implementation and scaling out

During FAO/GEF project implementation Land capability study and maps were prepared for three new municipalities (Banovici, Tuzla, Srebrenik).

Besides ongoing activities in Donja Luka, land consolidation activities will be implemented in area of Gornja Luka in total surface of 250 ha.

Donja Luka:
Before land consolidation: surface 101.5 ha; No. of parcels 744, No. of owners 121
After land consolidation: No. of parcels 127, No. of owners 116

Gornja Luka:
Before land consolidation: surface 250 ha; No. of parcels 1,667; 300 farmers will be involved

Two SLM demonstration sites were established SLM project promoted, municipalities in Tuzla are interested for land consolidation, other cantons interested for land capability maps and studies
Module 7. Knowledge management platform for informed decision making

Container cultivation of blueberries on infertile or degraded soils (Bosnia and Herzegovina)
Kontejnerski uzgoj borovnice na neplodnim ali degradiranim tlima

**DESCRIPTION**
The technology of container cultivation of berry fruits or possibly container growing of other crops allows organization of profitable agricultural production on soils with bad physical or chemical properties, soils with decreased fertility or non-fertile soils. The technology demands drip irrigation system.

Container cultivation of bush-like berry fruits is not a complete novelty. This approach for the SLM technology is characterized by extraordinary results achieved in the area of Živinice municipality by container cultivation of blueberries on soils of poor composition, physical properties and low fertility.

The technology basically enables successful breeding of bush-like berry fruits on non-fertile soils or soils with reduced and damaged agricultural production properties. This first step includes selection and cultivation of the best genotypes and varieties of blueberries with high potential for cultivation in less fertile areas. The main goal is to improve the quality of the production by the best methods of selection and cultivation. This is followed by the step of container cultivation, which is a new and innovative technology for the production of blueberries in the area of Živinice municipality.

**LOCATION**

Stopping the shallow landslides with barriers of wooden poles (Bosnia and Herzegovina)
Zaustavljanje plitkih kišišta drvenim šipovima

**DESCRIPTION**
Formation of wooden poles arranged in two lines and pounded into the ground with possibly accompanying drainage is an efficient way of stopping the movement of land in the recovering of shallow (2-3 m) landslides of relatively small surfaces.

Farmers in northeast parts of Bosnia and Herzegovina traditionally applied the technology for recovery of small landslides. During the last decades, it has become more frequently applied in the area of Kladanj Municipality, whose administrative services for agriculture and forestry technically specified and promoted the technology. Landslides are one of the most prominent problems of land threatening, particularly of agricultural lands in the hilly areas of Bosnia and Herzegovina, which prevail on its territory. Farmers apply the technology on their properties, but it also occurs in public interventions, e.g., in protection of roads or other infrastructure from landslides or recovery of roads damages due to landslides. The technology allows efficient stopping of terrain movements and it is especially used when it is necessary to ensure the safety of roads and other infrastructure.
The achievement of the defined targets and measures of LDN and SLM, in addition to political will, requires legislation, financial sources, creation of public awareness and education about land and its functions within the ecosystem in general.

Education of stakeholders and pilot activities are high priority!